

AMIGA CD 32™

Commodore

GUNSHIP —2000—



MICROPROSE

S I M U L A T I O N

FLIGHT CONTROLS

Cyclic (Joystick) Up, Down, Left, Right
Collective Up
Collective Down
Rotor On
Rotor Off
Auto-Hover
Next Waypoint
Multi-function Display (Cycle thru)
Acquire Target
Select Weapon
Fire Weapon

- D-Pad Up, Down, Left Right
- D-Pad Up & Yellow Button
- D-Pad Down & Yellow Button
- D-Pad Up & Green Button
- D-Pad Down & Green Button
- Green Button
- REV Button
- FWD Button
- Blue Button
- Yellow Button
- Red Button

PAUSE MENU

MAP

FWD/REV to choose command

D-Pad to move cursor

Red button to select

Yellow button to move to High Scale.

Commands:

Fly to	Land
Return to Base	Disengage
Next Unit	Regroup
Hold Position	Weapons Free
Speed Adjust	Cargo Drops
Altitude Adjust	

CONTROLS

End Mission	Autopilot
Last Message	Low Limit Adjust
Normal Time	Salvo Size x1, x2, x4
Accelerate Time	Jettison Weapons

INPUT DEVICE

(with keyboard attached)

Digital Joystick
Analog Joystick
Keyboard
Sensitivity - low, medium, high

VIEWS

Cockpit	Tactical
Mast	Remote
Left	Reverse Tactical
Right	Missile
Flight Chase	

SOUND OPTIONS

on/off

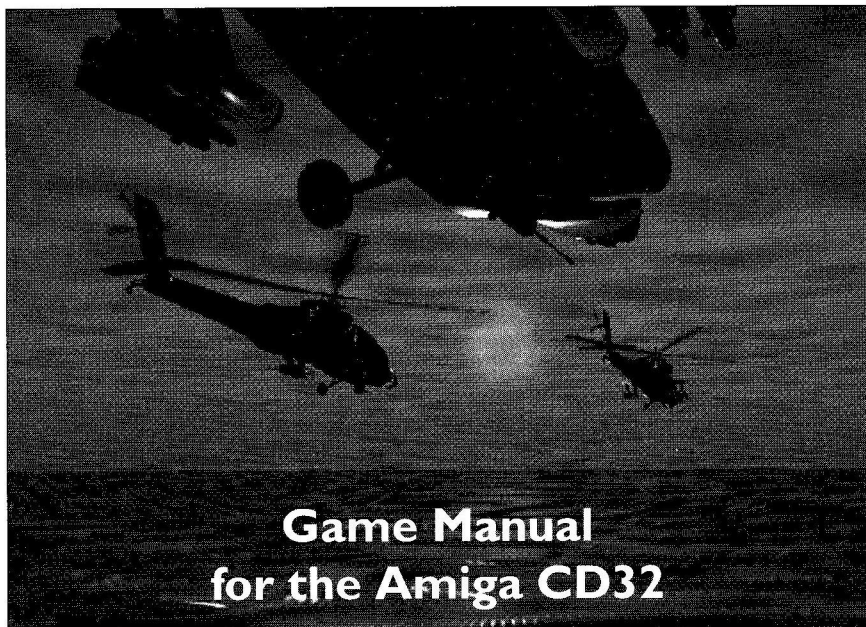
Player Chopper Sound
Warning Sounds
Sound Effects
Digitised Speech
Main Menu

DETAIL MENU

Scenery Detail level - low, med, high, off
Ground Detail level - low, med, high, off
MFD Detail level - low, med, high, off
Full Distance 3-D - on/off
Fast Horizon - on/off
Main Menu

RETURN TO GAME

GUNSHIPTM 2000



Game Manual for the Amiga CD32

MICRO PROSE

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EPILEPSY WARNING - PLEASE READ BEFORE USING YOUR AMIGA CD 32

A very small percentage of people have a condition that causes them to experience an epileptic seizure or altered consciousness when exposed to certain light patterns or flashing lights, including those that appear on a television screen and while playing games. Such people may have no medical history of seizures or epilepsy. Please take the following precautions to minimise any risk:

PRIOR TO USE:

- If you or anyone in your family has ever had an epileptic condition or has experienced altered consciousness when exposed to flickering light, consult your doctor prior to playing.
- Sit at least 2.5 m (8 ft) away from the screen.
- If you are tired or have not had much sleep, rest and commence playing only after you are fully rested.
- Make sure that the room in which you are playing is well lit.
- Use the game on as small a television screen as possible (preferably 14" or smaller).

DURING USE

- Rest for at least 10 minutes per hour while playing a game.
- Parents should supervise their children. If you or your child experiences any of the following symptoms while playing: dizziness, altered vision, eye or muscle twitches, loss of awareness, disorientation, any involuntary movement or convulsions IMMEDIATELY discontinue use and consult your doctor.

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Andy Hollis, Sid Meier and Arnold Hendrick - for developing the original Gunship

CONTENTS

OVERVIEW	4
TUTORIAL	5
Getting Started	5
Loading	5
The Amiga CD-32 Controller	5
Where you Start	6
At the Controls	8
OPERATING INSTRUCTIONS	11
Making Selections	11
Brigade HQ	11
Mission Briefing	14
Outfit Helicopters	15
Cockpit Switches	17
Simulation Controls and Views	19
Simulation Controls	19
Simulation Views	19
Helicopter Controls	22
Flight Controls	22
Weapon Controls	24
Helicopter Gauges and Indicators	25
AH-64A/B Apache	25
AH-66A Comanche	28
The Remaining Helicopters	28
How to Fly	29
Getting Airborne	29
Flight Techniques	29
Navigation	32
Landing	33
How to Fight	34
Threats	34
On the Defensive	35
Damage	36
Helicopter Weapons	36
On the Offensive	38
Air-to-Air Combat	41
Helicopter Flight Commands	43
System Summary	43
Command Control	43
Communications	45
After the Mission	47
Measure of Success	47
Flight Promotions	47
Replacements	48

OVERVIEW

Gunship 2000 is a detailed presentation of helicopter combat operations. You can control up to five distinct helicopters.

You start out as a Warrant Officer Candidate (WOC), select your squadron and provide its nickname. More importantly, you get the necessary training for helicopter combat.

Upon completion, you are promoted to Warrant Officer (WO1), and move on to Single Helicopter Missions. Here you command and fly a single helicopter, in one of two theatres, against opposing forces in a variety of missions. The rank of a commissioned officer awaits your success; and upon receiving your commission, the door opens to the endless variety and challenge of Flight and Campaign Missions.

In the Flight Missions you command five helicopters. You determine the mix of helicopters and ordnance necessary to complete the mission. How well you employ your own helicopter, plus command the other four helicopters determines the success or failure of the mission.

The Campaign Mission places you in a situation of continuous combat where mission after mission is thrown at you and your flight. While you can't win the campaign on your own, your success (or failure) does have an impact on its ultimate outcome.

TUTORIAL

This tutorial familiarises you with the basic controls and systems of the AH-64A Apache Gunship in a simple training flight against simulated opposing forces.

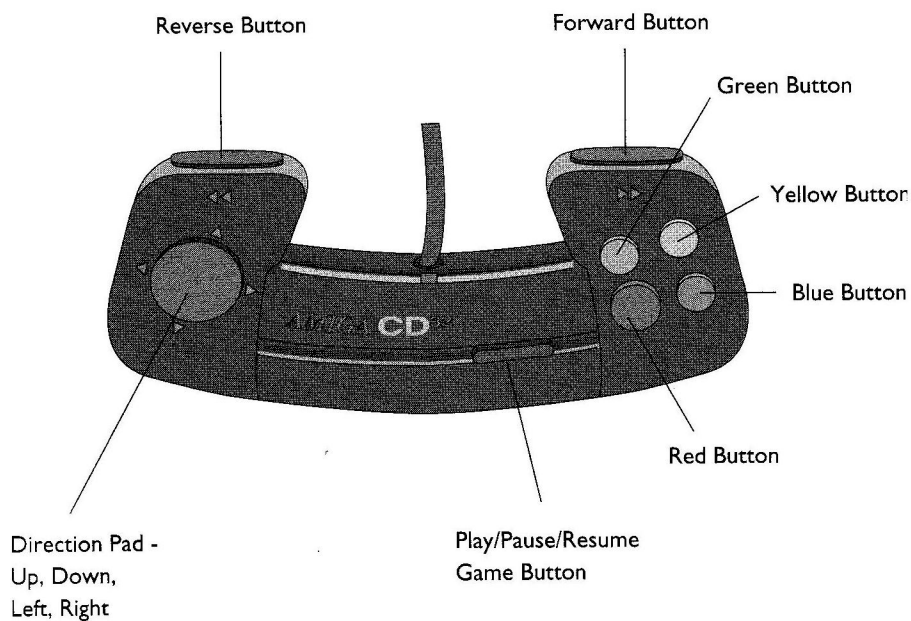
GETTING STARTED LOADING

Insert *Gunship 2000* CD into the Amiga CD 32 console as shown in the Commodore instruction booklet. After a few seconds, the opening sequence will run before the main game begins.

Press the Main Selector button (Red) to go to the Main Menu.

On the Main Menu, use your Direction Pad to highlight your menu choice; press the Main Selector button (Red) to select.

THE AMIGA CD 32 CONTROLLER



WHERE YOU START

After the title sequence, you'll find yourself at brigade headquarters.

Various "action areas" are placed at positions around this screen. These "action areas" are accessed to select the various options available at brigade headquarters.

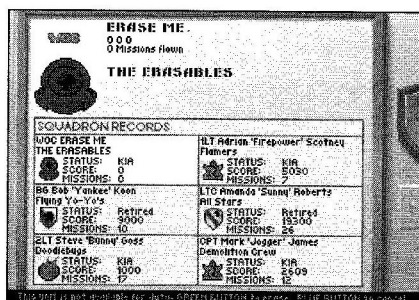
To select an option, use the D-Pad to position the cursor over the desired "action area". When an "action area" is accessed, the cursor changes shape to a bull's-eye and the option's title is displayed at the bottom of the screen.

Pressing the Red button selects that option.

Duty Roster

As a new pilot, your first step is to get your name up on the Duty Roster. As part of this process, you also have the opportunity to select your squadron unit insignia and its nickname.

Position the cursor (with the D-Pad) over the duty roster hanging on the back wall and press the Red button.



Duty Roster

The "Duty Roster" screen now appears.

Position the cursor over the "Erase Me" pilot and press the Green button. Use D-Pad up/down to enter the first letter of your name. Use D-Pad left to move to the next letter etc. Press Red button to select (Blue to cancel). Now use D-Pad left/right to select unit patch. Press Red button to select (Blue to cancel). Enter Unit name in the same way as you entered your name. Press Red button to post this unit, and return to the brigade headquarters screen.

Notice that your pilot's name and unit are now listed at the top of the Duty Roster.

Type of Flight

Now position the cursor over the duty officer's desk (he is sitting in the foreground) and press the Red button. The "Type of Flight" screen now appears.

Since you're in training, position the cursor over the "Training" and press the Red button. This places you in the training mode and returns you to the brigade headquarters screen.

Notice the duty officer and the envelope marked "Training"; this envelope contains your orders for this training mission.

Theatre of Duty

Now position the cursor over the world map located on the right wall and press the Red button. The "Theatre of Duty" screen now appears.

There are simulated training sites available for either of the two theatres - The Persian Gulf and Central Europe.

Select the Persian Gulf (you will eventually want to fly training missions in both theatres) by positioning the cursor in the box outlining the theatre and pressing the Red button. You now return to the brigade headquarters screen; notice that the Persian Gulf theatre is outlined on the world map.

Mission Briefing

You are now ready to start the training flight.

Position the cursor over the door marked "Exit" and press the Red button. The Briefing screen now appears.

It's time to familiarise yourself with the Mission Orders.

As you look out at the TF Commander, the top page of your Mission Orders is just visible at the bottom of the screen.

Position the cursor on the page and press the Red button. You are now looking down at the top page.

Since this is a training mission, some of the data is in abbreviated form; however note two important areas.

First, are the "Primary Mission" and "Secondary Missions". Review the type or nature of the missions. Additionally, the position of your base and FARP (Forward Arming and Refuelling Point) are also indicated.

Position the cursor anywhere on the page and press the Red button. The next page appears. This lists the support data about the position of your base, FARP, flight conditions and the S2's intelligence report.

Please note that the map coordinates are read military fashion, "right & up". The first number listed is on the horizontal scale, and the second on the vertical scale. For example, 00/16 is in the upper left corner. Remember that maps are never 100% accurate. This is especially true when sighting mobile units.

Position the cursor anywhere on the page and press the Red button. The mission map appears. This map indicates the relative positions of the different Primary Missions (P), your base (B) and FARP (F).

Additionally, the map details the major terrain features and other areas of interest.

To review the Mission Orders, you may sequentially leaf through the pages any number of times. After review, position the cursor over the envelope and press the Red button.

The Briefing Screen now appears.

For this flight let's go with the recommended weapon load and begin the mission. Position the cursor over the map and press the Red button.

The Cockpit Switches now appear.

Cockpit Switches

When *Gunship 2000* is first loaded, all of the switches are set at the lowest difficulty levels. Let's leave them that way for this flight. The Co-Pilot/Gunner (CP/G) can be set **either** to fire all weapons automatically and activate appropriate counter measures **or** control just the countermeasures.

You're now ready to start the mission.

Now position the cursor over the "Aux Power Unit" switch.

This switch starts the helicopter's engines, which begins the mission. It has a safety cover so that it won't be inadvertently activated.

Press the Red button, and the safety cover flips up.

Press the Red button again, and the power winds-up - your mission begins!

AT THE CONTROLS

Now you're on the ground at your base, at the controls of an AH-64A Apache. You have a pilot's eye view of the world as you look out over the cockpit gauges and indicators.

The following is an abridged version of the flight controls. You start the training mission by taking off from your base and end it by landing back at your base.

Getting Airborne

First, locate the Pause button on the Controller. You're advised to read a section, perform the actions, pause again and read on.

Your engines are already on line (the APU provided the necessary power to fire them up).

Now, engage the rotor. Press D-Pad up and the Green button to turn on the Rotor.

The rotor starts to rotate.

Vertical movement is controlled by the rotor blades being pitched 'collectively' to make the helicopter rise. This is known as the Collective.

Press the Collective Up (D-Pad Up with the Yellow key) a few times until the Apache starts to gain lift.

When the altitude reaches approximately 200 feet, press the Collective Down (D-Pad Down with the Yellow key) to stabilise the lift.

Horizontal movement is controlled by the Cyclic (D-Pad). This is like an aircraft joystick.

To move forward, push the D-Pad Up. You now start to gain speed. By pushing the D-Pad fully forward, the maximum speed for that altitude is attained. The D-Pad need not be kept in a forward position to maintain forward flight; it's self trimming when centred.

Next push the D-Pad slightly to the right. You bank and turn to the right. If you do the opposite, you bank and turn to the left.

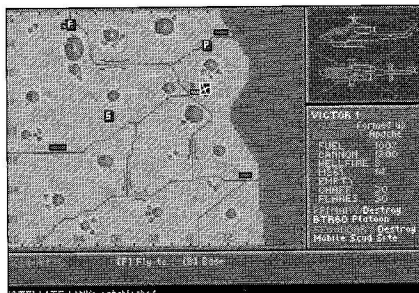


Cockpit

MAP VIEW (Pause Button Menu)

Press the Pause button twice then select Map View; the GPS (Global Positioning System) map now appears. Don't worry, your Apache doesn't crash while you're viewing the map - the action is suspended.

The GPS map displays the entire world in which you're flying. Notice that it matches the map you reviewed in your Mission Orders. Your Apache is positioned in the



Map

centre of the map, and the first Primary Objective is just to the north. Fwd and Rev buttons let you choose commands. The D-Pad will move the map cursor. The Red button selects, Blue cancels, and the Yellow button moves to the high scale map.

Let's use the Apache's INS (Inertial Navigation System) to navigate to the target.

Select the Fly To command. Position the cursor over the first Primary Objective, and press the Red button followed by the the Blue button.

This enters that position into the INS System.

You can check the map at any time during a flight to verify positions. For now, return to the cockpit view by pressing the Blue button.

The heading for the Primary Mission is displayed in the INS Indicator. More than likely, your true heading is different from the INS heading. Bank the Apache towards the INS heading indicator until the two heading numbers match. This new heading will take you to the first Primary Mission for gunnery practice.

Weapon Selection

Your Weapons Indicator (located at the lower left) should display "Cannon"; if not, press the Weapon Select (Yellow button) until it displays "Cannon".

Targeting

Before you can fire at an opposing unit, the TADS must be locked onto the target. Look at the Threat Display (it's located in the lower right hand corner). If you're flying in the correct direction, there should be a red dot directly ahead. If not, adjust your flight path. Check the map to verify the placement of your waypoint.

The TADS should be locked onto the target, a BTR-60 APC (the First Primary Mission). It's displayed, along with its identification, true heading and range data, in the MFD (located in the centre of the cockpit). If the TADS isn't locked onto the target, press the Acquire/Next Target button (Blue).

When locked, a Target Diamond appears in your view. The Target Box indicates the exact position and heading to the BTR-60. The Reticle Ring is the aiming point of the cannon. To hit the target, the Reticle Ring must be superimposed over the Target Diamond. Adjust your flight path if necessary.

Taking the Shot

When the BTR-60 enters maximum range for the cannon, the Target Box changes from a broken box to a solid. As the range decreases the Reticle Ring (a small circular head-up display) increases in size, indicating an increase in weapon accuracy.

When the range reaches about 700 metres, the co-pilot/gunner will open fire. You don't have to aim the cannon as it automatically tracks the target as long as the Reticle Ring is superimposed over the Target Box. After a few rounds, the BTR-60 is knocked out; you'll see its telltale explosion in the distance.

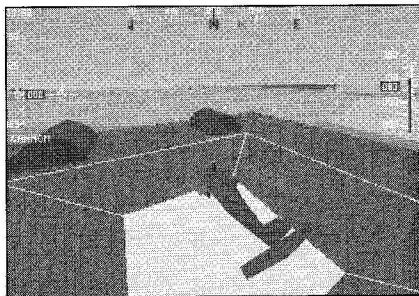
Return to Base

Select the Map View, and set the INS System for a heading to the base.

Fly the Apache to a position directly over the base's helicopter landing pad. When in position, pull back on the cyclic (D-Pad Down) and allow your speed to drop to zero.

Now, press the Collective Down (D-Pad Down and Yellow button) to start a slow descent on to the base. Don't worry, you can't crash on this flight.

Upon touchdown, disengage the rotor (D-Pad down and Green buttons), and the rotor slows to a stop. You'll be asked if you want to end the Mission. Press the Red button to accept. This training flight is now at an end.



Landing Pad

OPERATING INSTRUCTIONS

MAKING SELECTIONS

Gunship 2000 provides for a large number of game options. These are presented in various screens in the form of "action areas" or in a menu format.

When a screen first appears, the cursor will be positioned on the screen or over a menu selection. You move the cursor or change the menu selection by using the D-pad. Select by pressing the Red button.

Action Areas

Most options are accessed via "action areas". These are placed at various positions around the different screens. However, in some cases, menus are utilised where lists of data options are more functional.

To select an option, use the controller to position the cursor over the desired "action area". Pressing the Red button then selects that option. Menu options are selected in a similar manner; the selected option is highlighted.

BRIGADE HQ

An action begins at Brigade Headquarters, located at your home base. From this screen, the selections are made that determine the nature of your upcoming mission(s).

There are five "action areas" located at various positions around the screen, and these are accessed to make the various mission selections.

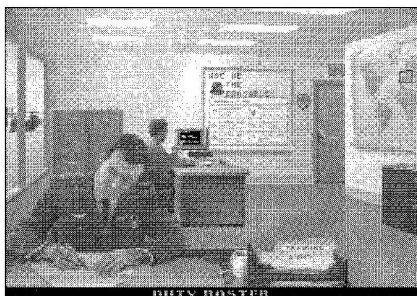
Duty Roster

Position the cursor over the Duty Roster hanging on the back wall and press the Red button.

The duty roster is used to show the name of an active pilot, and flight members, if any, for the upcoming mission.

It shows the pilot's name, rank, squadron insignia, squadron nickname, decorations awarded (numerals indicate multiple awards), missions flown and career score(s) display. If the pilot is a flight commander, the flight members are also listed along with their name, rank and decorations.

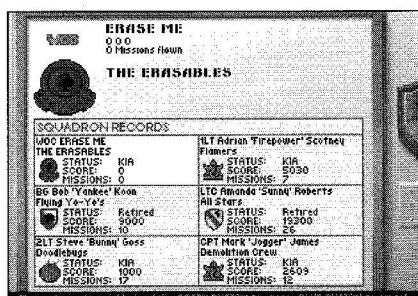
Ranks: Throughout a career, a pilot, including flight members, can advance through the ranks from Warrant Officer Candidate all the way up to Brigadier General. Ranks are indicated by a military abbreviation or by the actual rank insignia.



Base Screen

The military abbreviations correspond to the following ranks in order of achievement:

WOC: Warrant Officer Candidate
W01: Warrant Officer, W-1
CW2: Chief Warrant Officer, W-2
CW3: Chief Warrant Officer, W-3
CW4: Chief Warrant Officer, W-4
2LT: Second Lieutenant
1LT: First Lieutenant
CAP: Captain
MAJ: Major
LTC: Lieutenant Colonel
COL: Colonel
BG: Brigadier General



Roster Screen

Decorations: For exemplary service, a pilot, including flight members, are awarded decorations up to and including the Congressional Medal of Honour. Decorations are displayed by an abbreviation and by the actual medal.

The abbreviations correspond to the following decorations:

NDS: The National Defence Service Medal - awarded for successfully completing training.
PH: The Purple Heart - awarded for wounds received in combat.

The following decorations are awarded for heroism and valour, and are listed from least difficult to achieve to the highest:

ACV: The Army Commendation Medal for Valour
AMV: The Air Medal for Valour
BSV: The Bronze Star for Valour
SS: The Silver Star
DSC: The Distinguished Service Cross
CMOH: The Congressional Medal of Honour

Career Records: There are three numerical values that summarise a pilot's career records. They represent, from left to right, last mission, best mission and total career.

Status: Pilots, and consequently their flight members, are classified by the current flight status. Only "Active" pilots can be posted for duty.

Active: You can only have one 'active' pilot.

Retired: If you are successful enough to achieve the rank of Brigadier General, your country will ask no more of you.

MIA: If your helicopter goes down behind enemy lines, there's a chance you'll be lost or captured. As a result, you'll be classified as "Missing in Action".

KIA: If your helicopter suffers a catastrophic crash there's a chance you won't walk away from it. As a result, you'll be classified as "Killed in Action".

Campaigns: If your pilot and flight are currently engaged in a campaign, that information is displayed. Campaigns must be resolved before any other mission (except training) can be flown.

New Pilot: If you are creating a new pilot, you must permanently erase an existing pilot from the Duty Roster.

An "Erase Me" pilot has been provided for your first entry.

Position the cursor over the "Erase Me" pilot and press the Blue button; follow the instructions to enter your name and select your squadron insignia and its nickname. Notice that your pilot's name and unit are now listed at the top of the Duty Roster. All new pilots start out at the rank of WOC.

Leave the cursor positioned over your new pilot (the corresponding data is displayed in the top section) and press the Red button.

Existing Pilot: If you don't want to create a new pilot and want to continue the career of an "Active" pilot, position the cursor over that pilot and press the Red button.

Type of Flight

Position the cursor over the duty officer's desk (he is sitting in the foreground) and press the Red button.

The open folder displays the available mission options:

Training: These missions are conducted at the training centre, and are constructed to simulate the Theatres of Duty. The opposing forces are always positioned in the same manner so that various weapons and tactics can be tested.

Training missions simulate all helicopter operations with the following exceptions:

No Damage: You can't be hurt, as all of the opposing shots are simulated, and you walk away from all crash landings. However, the opposing weapons do behave normally, so you can still practice defensive measures.

Career Record: The Training mission does not count as a mission flown; you don't receive any score, promotion or decorations for heroism and valour.

Training missions can be flown at any time during a pilot's career, and, in fact, are the only alternative mission type that can be selected if a pilot is currently engaged in a Campaign. New pilots are not required to select Training, but if you do, at least you'll receive quick promotion to WO1 and the NDS medal.

Single Helicopter: These missions send you out in a single helicopter against a real opposing force. While any pilot can fly these missions, pilots of any Warrant Officer rank are limited to Single Helicopter Missions.

During Single Helicopter missions, you're assigned a Primary, and more than likely, a Secondary mission. These missions can either be Point Attack or Search & Destroy.

Point Attack: You're directed to a specific target or targets with the objective to eliminate the targets.

Search & Destroy: The specific location of the targets is unknown or the targets are moving. You need to search the area described in your orders to find the target units with the objective to eliminate them.

Flight: Once you have received your commission (ranks of Second Lieutenant and above), you are then eligible to command a multiple- helicopter flight. The other pilots in your flight are assigned to you from the force pool, and stay with you for the duration.

As with Single Helicopter missions, you're assigned overall missions. The missions include the two described above plus Deep Strike, Tactical Support, Search & Rescue and Recon.

Deep Strike: You're directed to a target or targets deep in enemy territory. We take care of getting you to the "passage point", but you must take it from there.

Tactical Support: You're called upon to pick-up or deliver troops or supplies to the battle area. A UH-60K/L Blackhawk must be on tap to successfully complete these missions.

Search & Rescue: Friendly forces are in need of extraction, but must first be located. The UH-60K/L Blackhawk must be on tap to successfully complete these missions.

Recon: The scouts lead the way here, as you're ordered to see what's out there. The OH-58D Kiowa Warrior, AH-66A Comanche or AH-6G Defender must be on tap to successfully complete these missions.

Campaign: This is a theatre-wide commitment for the long haul. You're placed in a situation of continuous combat where mission after mission is thrown at you and your flight.

Theatre of Duty

If you are a new pilot, it's best to choose Training as your first flight. In any case, position the cursor over the the desired mission type and press the Red button.

Position the cursor over the world map located on the right wall and press the Red button.

Persian Gulf: The Iraqis are a well equipped foe. They possess a high degree of commitment and won't easily waiver.

Central Europe: This region is the greatest challenge since you are up against the best the Russians have to offer. The region remains unstable.

Duty Roster: Position the cursor over the top drawer and press the Red button; this drawer contains the pre-mission Duty Roster.

One warning - you must actually fly the mission before you can restore the Duty Roster.

Exiting Brigade HQ

Position the cursor over the door marked "Exit" and press the Red button.

MISSION BRIEFING

There are three "action areas" located at various positions around the screen.

Mission Orders

The top page of your Mission Orders is just visible at the bottom of the screen. Position the cursor on the page and press the Red button.

These four pages not only detail the upcoming mission, but also provide important intelligence data about the opposing forces. It's very important to read your orders carefully. Press the Red button to leaf through the pages.

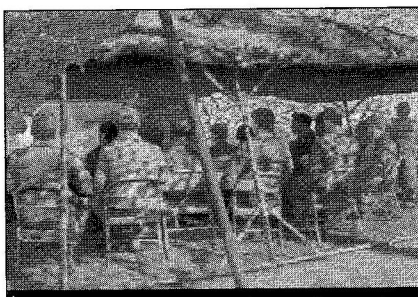
Call Sign: You're always number "1".

Primary Mission: This is why you're being sent out. Make sure that you understand the components of the Primary. Its general location is indicated on the mission map with a "P".

Secondary Mission: The Secondary Mission's general location is indicated on the mission map with an "S".

Base: This is where you will start and finish the mission. Its location is indicated on the mission map with a "B".

Note that on Deep Strike missions, your base is somewhere off the mission map. You start on the edge of the world at the "Passage Point"; this is expressed as two coordinate values. This is the only safe exit from the mission.



Tent Screen

FARP: If a "FARP" is available, its location is indicated on the mission map with an "F". You may land at a FARP to replenish fuel and weapons.

S-2 Report: The S-2 gives you his best estimate about the opposing force's equipment. Pay special attention to the availability of opposing helicopters.

Conditions: A brief report on the weather conditions in the flight area. How these conditions affect flying is dependent upon the flight switch settings.

Mission Map: This is the flight area for the current mission. All of the key points of interest are indicated on the map.

Please note that the map coordinates are read military fashion, "right & up". For example, 00 16 is in the upper left corner. Remember that maps are never 100% accurate.

Decline Mission: In the event you really don't want to fly this mission, you can opt to pass it along to someone else and request new orders. If currently engaged in a campaign, this page provides the mechanism to suspend or abort the campaign and return to Brigade HQ.

To review the Mission Orders, you may sequentially leaf through the pages any number of times. After review, position the cursor over the envelope and press the Red button.

OUTFIT HELICOPTERS

The squadron armourer routinely places the recommended helicopters, with ordnance, on the flightline. You can accept his recommendations or change any or all of the helicopters and ordnance. To review, position the cursor over the helicopters in the background and press the Red button.

This provides a complete overview of the pilot assignments, helicopters and their respective ordnance. From this screen, you may shift the pilots and/or helicopters to other positions and also assign section leaders.

Outfit Summary

Swap Pilots: Position the cursor anywhere in the first pilot's summary section and press the Yellow (Swap Pilots) button; the pilot's outline now starts to flash. Position the cursor in the second pilot's summary section and again press the Yellow (Swap Pilots) button. There's just one restriction, you must occupy the #1 position. After all, you're the flight leader.

Swap Helicopters: Position the cursor anywhere in the first helicopter's summary section and press the FWD (Swap Helicopters) button; the helicopter's outline now starts to flash.

Duplicate Helicopters: Position the cursor anywhere in the first helicopter's summary section and press the REV (duplicate helicopters) button; the helicopter's outline now starts to flash. Position the cursor in the second helicopter's summary section and again press the REV (duplicate helicopters) button.

CALLSIGN: INDIA 1  CALLSIGN: INDIA 2  CALLSIGN: INDIA 3 	CALLSIGN: INDIA 1  CALLSIGN: INDIA 2  CALLSIGN: INDIA 3 	CALLSIGN: INDIA 1  CALLSIGN: INDIA 2  CALLSIGN: INDIA 3 
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You're always a section leader; the pilots occupying positions #3 and #4 may alternately be assigned as a section leader. Position the cursor anywhere in the pilot's summary section and press the Green (Assign Section Leader) button.

Return to the Mission Briefing screen when satisfied with the mix, but first, read on.

If you want to change a helicopter's ordnance, or change the actual helicopter, position the cursor anywhere in the helicopter's summary section and press the Red button. The Arming Screen displays the current helicopter along with its ordnance.

To select a weapon, highlight it and press the Red button ; then select the appropriate option among those available. Existing weapons can be directly replaced; the existing weapon doesn't need to be first removed.

Ammo: This only applies to helicopters with integral cannons or machine-guns. Highlight “Ammo” and press the Red button.

Load: All helicopters are rated for a maximum load capacity; this value is expressed as a factor of 100%.

[illegible]

GUNSHIP 2000

The load capacity is automatically calculated for each helicopter, but of course, varies by the theatre and mission conditions. As you change weapons or increase/decrease Fuel or Ammo the load capacity changes. A load of less than 100% is desirable since more reserve power is then available.

Change Helicopter: Highlight "Change Helicopter" and press the Red button. Select the new helicopter by highlighting it and pressing the Red button. New helicopters always arrive on the flightline "clean" (without ordnance).

Return to the Outfit Summary screen when satisfied with the mix; move the cursor over 'Accept' and press the Red button.

Exiting Mission Briefing

You're ready to start the mission. Position the cursor over the map and press the Red button.

Note that during campaigns, this map is used to advise you of the current state of a campaign. The degree of victory or defeat is indicated by how far the blue side (friendly) or the red side (opposing) has advanced beyond the original front line.

COCKPIT SWITCHES

You preflight, or set, the Cockpit Switches to determine the overall "reality" or difficulty of the upcoming mission. Many different switch combinations allow you to tailor the settings to your own particular needs.

There are nine "action areas" located at various positions around the screen. The "Data Display" in the upper right corner displays a brief description of each switch whenever an action area is accessed. Change switch settings by positioning the cursor over the switch and pressing the Red button.

CP/G Controls

This assigns duties to your invisible CP/G, and enables you to concentrate on other activities.

Weapons/C.M.: The CP/G automatically fires all weapons. The CP/G additionally activates the appropriate counter-measures systems as needed.

C.M.: The GP/G controls just the C.M. systems.

Enemy Quality

This determines the competency level and training of the opposing forces.

Poor: A good first opponent for new pilots.

Average: These are your basic every day troops.

Crack: These guys know their business, and are a real challenge.

Elite: You need to be exceptionally quick and skillful to get the upper hand.



Switches Screen

Flight

This switch sets the flight mode parameters of your helicopter.

Easy: The pitch, roll, altitude and airspeed of the helicopter have no effect on lift. No matter how you manoeuvre the cyclic (joystick), lift, and therefore, your altitude is unaffected. The collective is the only control that affects lift/altitude.

Realistic: Here the pitch, roll, altitude and airspeed affect lift as in a real helicopter.

Landings

This switch sets the difficulty level for your landing attempts.

No Crashes: All landings are perfect.

Realistic: Landings need to be within the design specifications of the helicopter.

Avoidance

This switch turns the on-board collision avoidance system on or off.

On: The helicopter automatically avoids crashing into hillsides. The system avoids the objects by gaining altitude.

Off: You're on your own, so keep alert. The radar altimeter is probably your best friend.

Wind

This switch activates or deactivates wind effects.

No Wind: The flight conditions are calm and serene.

Realistic: The wind is blowing across the battle field at the velocity and bearing indicated in the Mission Orders.

Visibility

This switch's setting determines clarity of vision

Clear: Visibility is unlimited.

Realistic: Visibility can be limited by battlefield/weather conditions.

Difficulty

The combination of theatre, mission type and switch settings determines the overall difficulty level of the upcoming mission. When fully illuminated, the mission is of extreme difficulty. The indicator is unilluminated, regardless of the settings, for Training Missions, as no score is awarded.

APU

Now position the cursor over the "Aux Power Unit" switch. This switch is used to start the helicopter's engines and begin the mission. It has a safety cover so that it won't be inadvertently activated; it requires two keystrokes to activate. Press the Red button, and the safety cover flips up. Press the Red button again, and the power starts to wind-up.

SIMULATION CONTROLS AND VIEWS

SIMULATION CONTROLS

A number of commands are available to control "overhead" or various game functions. While these commands can be utilised at any time, some relate to specific functions and have no effect.

Pause

Press the Pause button to freeze the action.

Pause Menu

Press the Pause button a second time to view the Pause Menu.

Detail Adjust

You may use the Detail Adjust from the Pause Menu - Detail Options. The simpler detail levels increase the processing speed. The action is temporarily suspended when making the selections.

End Mission

Press the End Mission from the Pause Menu - Controls to end the current mission. You can't use this to escape from impending disaster; and the results do count as a mission flown.

Sound Options

All Sound Options are accessed from the Pause Menu.

Last Message - Pause Menu - Controls Options

The other section leader or pilots communicate with you during the course of a mission. These messages stay visible for only a short period of time. If for some reason you are unable to review an entire message (you could be busy with some bad guys of your own), selecting Last Message from the Controls option in the Pause Menu.

Accelerate Time - Pause Menu - Controls Options

Select Accelerate Time to increase the rate at which time passes - a variable setting of 10 levels in steps of 2.

Normal Time - Pause Menu - Controls Options

Select Normal Time to return to normal time. Flight automatically returns to normal time whenever a target is sighted or upon reaching the final waypoint.

SIMULATION VIEWS

Gunship 2000 offers a number of different points of view while flying. You can jump from inside the cockpit to a point of view outside or even ride a Hellfire into its target.

From-The-Cockpit Views -Pause Menu - Views Option

Cockpit: This is your normal from the cockpit view. From this you see the gauges and controls of the cockpit panel.

Mast: The OH-58D Kiowa Warrior, MD530G Defender and AH-64B Longbow Apache are equipped with mast mounted sights. They're used to peer over the tops of obstacles safe from opposing weapons. They're best employed from hover mode (the auto-hover mode holds your position), as you really can't mask behind terrain in forward flight. When activated, the D-Pad is used to rotate the sight, left or right, through 360°, not to control helicopter flight.

Left View

Right View

Out-Of-Cockpit Views - Pause Menu - Views Option

Flight Chase View: You're positioned just behind one of your pilot's helicopters looking past it at whatever lies ahead. Select again to shift your view to the next helicopter.

Tactical View: You're positioned just behind your helicopter, looking past it at the target. This view automatically rotates and pans to keep both the helicopter and target in view.

This view is helpful when engaging air targets, and is also useful if you want to return for a second or third pass at a ground target. It's probably wise to return to the cockpit before firing, so as not to waste ammunition.

Remote View: You're positioned just off from your helicopter; your helicopter continues its flight. This view automatically rotates and pans to keep your helicopter in view. Additionally, by pressing and holding the Blue button and adjusting the D-Pad, you can shift your point of view. Holding the Blue button maintains that point of view.

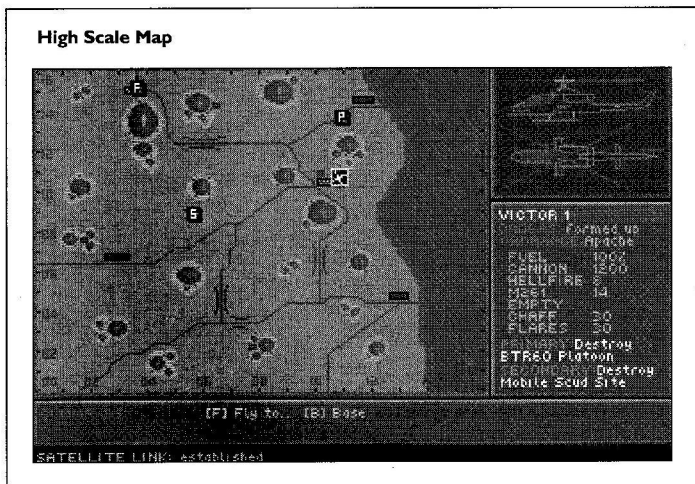
Reverse Tactical View: You're positioned just behind your helicopter's target, looking past it at your own helicopter.

Missile View: You're positioned directly behind the weapon just launched.

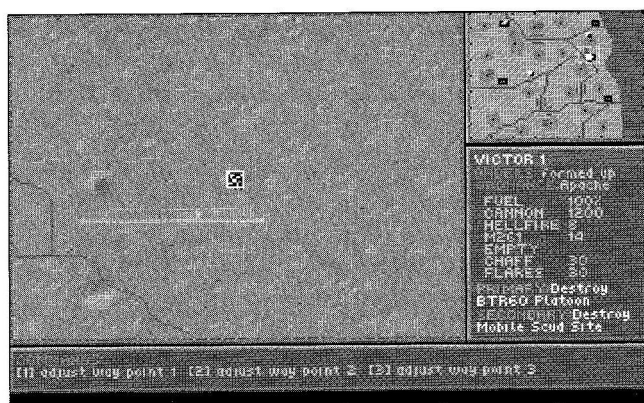
Pause Menu - Map Option

Map View: The GPS map displays the entire world in which you're flying in low and high scales.

This map displays the positions of all friendly units and of sighted opposing units. Current sightings display in bright red, while old sightings display in dark red. Remember that the opposing forces may be moving. The different terrain features are depicted on the high scale maps.



Low Scale Map



Map Scale: Press the Yellow button to switch to the low scale mode. The low scale maps depict specific terrain features (eg actual mountains). The displayed area is scrolled by moving the D-Pad in any direction. A reduced version of the large scale map displays in the upper right corner; the yellow indicator "boxes" the display area. Select to return to the high scale map, or the Blue button to return to flight mode.

Map Icons



Infantry



Vehicle



Structure



AA Unit



Train



Ship



Tank



Destroyed

HELICOPTER CONTROLS

FLIGHT CONTROLS

A number of controls and flying aids are available to you as a pilot. But do not use this section as a guide to flying (see later).

Cyclic Stick

Pushing the D-Pad up pitches the helicopter's nose down.

Pulling the D-Pad down pitches the helicopter's nose up.

Pushing the D-Pad left or right rolls the helicopter in that direction.

A downward pitch moves the helicopter forward.

A large down pitch causes a faster dive in Realistic Flight mode.

An upward pitch moves the helicopter backwards.

Rolling the helicopter left or right at extremely low speeds (under 10 knots) causes the helicopter to rotate left or right. At low speed (under 40 knots), it causes a skid or "sideslip" left or right. At medium or high speed, it causes a banking turn left or right.

The Artificial Horizon Gauge shows the current pitch and roll of the helicopter.

Collective

Lift keeps the helicopter airborne. In level flight, increasing the collective causes the helicopter to ascend, while decreasing the collective causes the helicopter to descend. The current level of the collective is measured as "torque". When raising or lower the collective, the engine torque/throttle is automatically adjusted.

To raise or lower the collective, press the Collective Up (D-Pad Up & Yellow) or the Collective Down (D-Pad Down & Yellow).

The Torque Gauge indicates the current level of torque.

Gear

The Gear Indicator Light is illuminated when it's down.

Autopilot

Select the Autopilot in the Pause Menu Controls Options to engage.

Touch the D-Pad to disengage.

When engaged, it flies you to the "active" INS waypoint; if no waypoints are set, the autopilot doesn't engage. When engaged, the autopilot locks in your current altitude and speed. However, if your altitude is less than the Low Limit, the Auto-Pilot climbs the helicopter to that altitude. If the cyclic stick (D-Pad) is moved in any direction, the autopilot automatically disengages.

The autopilot Indicator Light illuminates when it's engaged.

Warning: the autopilot doesn't avoid hills or obstacles (unless Collision Avoidance is engaged); it flies a straight line from waypoint to waypoint.

Next Waypoint - Rev Button

Press the Next Waypoint (Rev) button to cycle through to the next waypoint. This can be selected while the autopilot is engaged.

Bay Open/Close

This is a Co-Pilot function and occurs automatically. The Bay Indicator Light is illuminated when it's open.

Rotor Engage/Disengage (D-Pad up/down & Green)

Press the Rotor Engage/Disengage (D-Pad up/down and Green) buttons to engage the rotor (cause the engines to turn the rotor), or disengage the rotor (cause the rotor to spin freely, unconnected from the engines) respectively. When it's disengaged, the collective is automatically "bottomed" (set to zero).

The Rotor Status Light indicates if the rotor is engaged (green) or disengaged (red). The light flashes red if you attempt to add collective with the rotor disengaged.

Auto-Hover (Tap Green)

When flying at a speed from +10 to -10 knots, tapping the Auto-Hover (Green) button automatically places the helicopter in hover mode; your speed is automatically reduced to zero. The collective controls can be used normally, but auto-hover doesn't allow the altitude to drop below the Low Limit. Therefore, you can't land with auto-hover engaged. If the cyclic stick (D-Pad) is moved forward or back (you may still rotate left or right), auto-hover automatically disengages.

The auto-hover Indicator Light illuminates when it's engaged; it flashes when engaged at too high a speed.

Auto-hover is very useful to maintain a position during windy conditions or to unmask and quickly mask from cover. You can drop altitude like a rock, since auto-hover holds you at the Low Limit Altitude.

MFD Cycle Through (FWD Button)

Press the FWD Button to change the information displayed in the MFD. Helicopters with a single MFD have five possible displays: navigation (heading & waypoint data), low scale map, mission orders, weapons status or target camera. The target camera automatically displays, overriding any other display, whenever a lock-on occurs.

Right MFD

The threat display automatically displays, overriding any other display, whenever a target is detected.

Low Limit (Pause Menu - Controls)

Select Low Limit to decrease or increase the low altitude limit in 50ft units; it cannot be reduced below 50ft or above 250ft. Both the barometric and radar altimeters utilise the low limit setting as the basis for low altitude warnings. Audio and visual indicators are activated whenever the altitude falls below the low limit.

In addition to its function as a flying aid, the low limit is used to set the flying altitude of independent helicopters and/or sections.

WEAPON CONTROLS

A number of weapon controls are available. The following describes and defines how each works. Do not use this section as a guide to combat, see "How to Fight".

Rocket Salvo X1, X2, X4 (Pause Menu - Controls)

Select Rocket Salvo x1, x2 or x4 (1, 2, 4) to set the number of Hydra 70 unguided rockets that will be fired from each wing pod whenever "rockets" are selected and the Red button is pressed. Rockets are fired symmetrically from both wing pods, except for the Kiowa Warrior and Defender. The salvo mode is shown in the Weapons Display.

Acquire/Next Target (Blue button)

Tap the Acquire/Next Target button to lock onto a target or to switch the current lock-on. Normally, the targeting system automatically locks onto the nearest target; this enables you to switch to an alternate target.

If no other targets are present, the lock-on remains with the current target. The target system toggles through the potential targets from nearest to farthest.

Radar Jammer

Drop Chaff

IR Jammer

Drop Flare

all systems controlled by Co-pilot/Gunner

Select Weapon

Press the Yellow button to change the active weapon; the active weapon, along with the available quantity, is shown in the Weapons Indicator.

Fire Weapon

Press the Red button to fire the active weapon. Most weapons are fired/launched one at a time; each time the Red button is pressed, one round is fired. However, rockets are fired in salvos and cannons & machine-guns fire in multiple-round bursts.

HELICOPTER GAUGES AND INDICATORS

AH-64A/B APACHE

Airspeed Gauge

This gauge, along with its digital readout, shows your horizontal speed through the air in knots. A speed of 100 kts equals about 114 mph, or about 161 kph.

Altimetre

This gauge, along with its digital readout, is your barometric altimeter; it shows your true altitude in feet. It's adjusted for you to compensate for ground elevation variances so that "0" altitude is always at ground level.

Artificial Horizon

This ball gauge shows your pitch (nose up or down) and your roll (left or right).

Auto Pilot

The "P" illuminates whenever the autopilot is engaged.

Auto-Hover

The "H" illuminates whenever auto-hover is engaged.

Compass

The analog compass, along with its digital readout, indicates your current heading. Note that the compass shows the heading your helicopter faces. During skids or backwards flight, your actual course is different.

Chaff and Flare Indicator

This indicator shows the number of defensive stores remaining. It's shown as chaff "CF" and flares "FL". Each defensive unit is released as a group of three cartridges.

Engine Gauge

The left and right strips in the gauge marked "E" show the RPM's of the port (left) and starboard (right) engines.

Fuel Gauge

The gauge marked "F" shows the amount of fuel remaining in all tanks.

HUD

The HUD (Head-Up Display) projects bright numbers and symbols ahead of your view so that you can simultaneously read the display and look ahead.

The left scale indicates your airspeed along with a symbolic representation of the artificial horizon.

The right side scale combines the radar altimeter with the vertical speed indicator (see below).

The radar altimeter is probably the most important indicator you have, so pay close attention to it. It indicates your actual height over ground. There's an important distinction between this and the standard altimeter. As you fly over obstacles your true

altitude remains constant, but the height over ground changes. The red band at the lower end of the scale is low limit.

The top scale is your heading along with the INS and target lock-on pips.

INS Indicator

The INS (Inertial Navigation System) indicator indicates your course to your current waypoint. The top fixed pip is your heading, while the bottom pip is the waypoint. If it's right of centre, turn to the right; if it's left of centre, turn to the left. The waypoint course is also indicated digitally.

MFD

The MFD has five possible displays: navigation (heading & waypoint data), low scale map, mission orders, weapon status or target camera.

Rotor Light

The light is green when the main rotor is engaged. The light is red when the main rotor is disengaged, i.e. spinning freely, unconnected to the engines.

Systems Status Lights

These lights show the status of major systems on board your helicopter. A green light means the system is functioning normally; a yellow means the system is damaged and malfunctioning; a red light means the system is knocked-out and off-line.

The abbreviations represent:

AVN: Avionics (gauges, defensive measures)	PTW: port weapons wing
CAN: integral cannon	RTR: Main Rotor
FUL: fuel tanks	SBE: starboard engine
OPT: optics (targeting systems)	SBW: starboard weapons wing
PTE: port engine	TAL: tail rotor (flight stability)

Threat Display

This screen shows nearby targets that can potentially threaten your helicopter. Red dots are opposing units, grey dots are non-threatening units or structures, blue dots are enemy aircraft, and yellow dots are missiles in flight. This includes both opposing missiles AND your missiles. The white flashing dot is your present target.

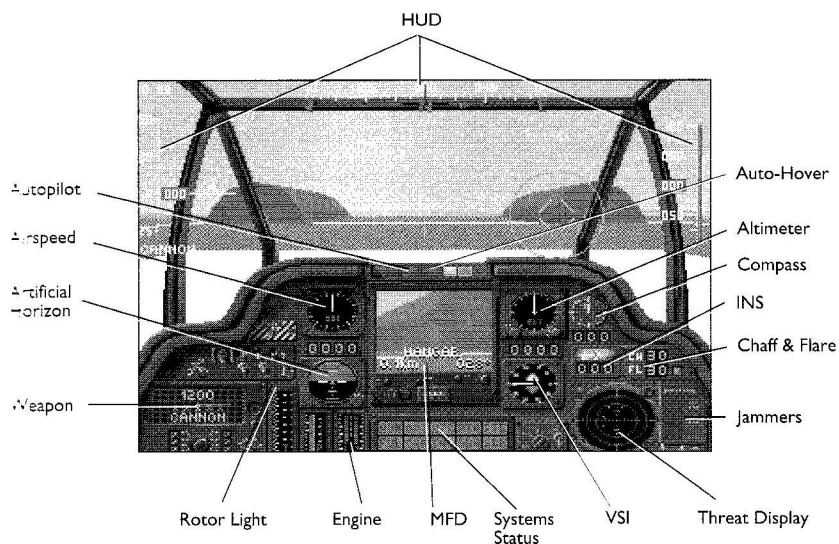
The threat display automatically scales from short to long range (short range will override long range).

Torque Gauge

The strip shows the amount of torque in the turbine engine(s). This is proportional to the amount of collective control and rotor lift. The higher you set the collective, the higher the torque.

VSI

The VSI (vertical speed indicator) shows the rate you are changing altitude (ascending or descending). If the needle is horizontal, you're maintaining a constant altitude. If the needle dips downward, you're descending towards the ground; if it points upward, you're ascending. The greater the needle varies from horizontal, the greater the altitude change.



Warning Indicators and Jammers

The “R” warning light flashes red whenever a search radar “sweeps” over your helicopter. When tracking (firing) radar for either guns or missiles locks onto your helicopter, the light turns solid red. If the jamming is successful, the solid red warning light turns off.

Note: your jammer can’t suppress radar searches, so flashing red warnings may continue even if your jammer is active. If you leave the jammer active they’ll eventually “read” your frequency and overcome the jamming.

The “I” warning light turns solid red whenever an infrared (IR) homing weapon is approaching your helicopter. If the jamming is successful, the solid red warning light turns off.

While the radar jammer can remain on, the IR jammer eventually “times out” due to heat. It must cool down to again become effective.

Note: there aren’t any active IR search devices, IR search is passive, therefore there’s no flashing red “IR” warning.

The “L” warning light turns solid red whenever your helicopter is being illuminated by a laser ranging or targeting device.

Weapons Indicator

The weapons indicator shows the active weapon, its position on the helicopter, and quantity of rounds remaining. For rockets, it also indicates the current salvo setting.

AH-66A COMANCHE

The Comanche cockpit is dominated by electronic systems, and aptly fits the trend towards total digital display. The first thing you notice is the lack of analog indicators (except for the compass).

Airspeed and Altimeter

The airspeed (ASI) and altimeter (ALT) data are both digitally represented. Next to the altimeter is the VSI icon; it indicates ascending, descending and neutral altitude change modes.

Gear

The status retractable landing gear is indicated by the gear ("G") light; it's illuminated when it's down. Gear is controlled automatically by the co-pilot.

Bay

The status of the weapons bay is indicated by the bay ("B") light; it's illuminated when the bay is open. The bay is controlled automatically by the co-pilot.

Other Displays

The remaining indicators, displays and HUD function in a similar manner to the Apaches.

THE REMAINING HELICOPTERS

Although their cockpit layouts differ from the Apaches, the gauges, indicators and HUD in the other helicopters function exactly like the Apaches. Just familiarise yourself with the unique layouts; the "look" of the gauges and indicators has been standardised for ease of use.

HOW TO FLY

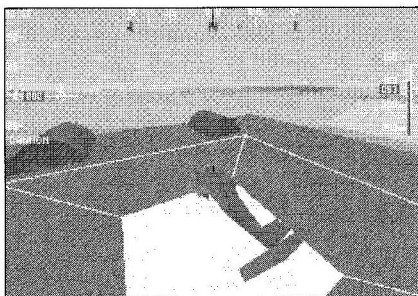
Remember just one thing - DON'T OVERCONTROL!

Helicopter controls are sluggish; they react slowly. Even the most responsive helicopter (like the Comanche) takes a couple of seconds to respond to your control movements.

GETTING AIRBORNE

Engage the Rotor

Your power is already on; the APU provided the power to start the engines. Press the Rotor Engage/Disengage (D-Pad Up/down and Green) buttons to engage the rotor system. The rotor status light turns green when the rotor is engaged. The rotors now come up to speed (the sound level increases).



Landing Pad

Climb to a Hover

Press the Collective Up (D-Pad Up and Yellow button) until the helicopter starts to ascend. The torque gauge rises as you "raise" the collective. Press the Collective Down (D-Pad Down and Yellow button) if the ascent is too fast. The VSI indicates the rate of your ascent (the indicator is above horizontal). Let the helicopter ascend to about 100 feet.

Tap the Auto-Hover (Green button) anytime your speed is from +10 to -10 knots. It's very useful to maintain a position during windy conditions or to unmask and quickly mask from cover.

Rotating in Hover

Push the Cyclic (D-Pad) left or right to rotate the helicopter in that direction. The speed of rotation is dependent on how far the Cyclic is pushed. Centre the Cyclic (press the opposite D-Pad arrow) until rotation stops. You can only rotate the helicopter at speeds under 10 kts.

FLIGHT TECHNIQUES

Forward Flight

Add a little more collective (D-Pad Up & Yellow button). As you begin climbing, push the Cyclic (D-Pad) up slightly to "pitch down" the helicopter. You'll begin to move forward. At about 30 kts, you'll start to climb. Your altimeter and VSI reflect this change in lift. This is because forward motion in a helicopter adds extra lift (termed "translational lift"), especially at 30-90 kts.

The further you pitch down, the more your speed increases. As your speed exceeds 100 kts, translational lift decreases. The VSI starts to move to the negative end of the scale. More pitch downward will push you into a dive.

Easy Flight: Lift is unaffected by forward motion. Your altitude remains constant, and is therefore independent of the cyclic.

Level Flight

Move the Cyclic forward or back until the airspeed reads about 120 kts. Now check the VSI. If you're descending (the indicator is below horizontal), add more Collective until the indicator is horizontal. Alternately, if you're ascending, reduce Collective. When the VSI is horizontal, you're in level flight.

Due to the slow control response, it's easy to over-correct and add or reduce the collective too much. You'll constantly "chase the needle", trying to stabilise your flight. After each adjustment, wait a moment for the VSI to stabilise.

Easy Flight: These adjustments are unnecessary since lift is unaffected by forward motion.

Changing Altitude

When flying level (about 120 kts), the easiest way to descend is to push the Cyclic forward (D-Pad Up) into a dive. As you approach the altitude desired, gently pull the Cyclic back (D-Pad Down) until the VSI again stabilises.

Similarly, the easiest way to ascend is to pitch up slightly, reducing airspeed below 100 kts. When you reach the desired altitude, pitch down again until the VSI stabilises. This technique is not unlike conventional airplane flight. You're able to change altitude without adjusting the collective.

A second way to change altitude, applicable at any speed, is to raise or lower the collective. When you reach the desired altitude, adjust an opposite amount of collective to regain level flight. This is the only way to change altitude from a hover.

Regardless of the technique used, don't try to fly the helicopter by constantly adjusting the collective. Learn to "feel" the correct collective setting, and then fly with just your cyclic. This takes time, so be patient. Even real pilots must practice many long hours before it's mastered.

Easy Flight: The collective must be used to change your altitude; it's just like choosing the floors on an elevator.

Low Limit

The low altitude limit is a flying aid that warns you of close ground proximity. It works in conjunction with the radar altimeter and is displayed as a red band on the radar altimeter.

Turning

From a level flight (about 120 kts), move the Cyclic slightly to the left. Your helicopter rolls into a banking left turn. As you turn, observe the change in your compass heading. Move the Cyclic further left and bank into a tight turn; you'll now start to lose lift. Notice that your altitude is dropping and the VSI is below horizontal. If you centre the Cyclic and level out, you'll return to level flight.

There are two methods to maintain altitude in a tight turn; this could be very important at low altitudes. Add some Collective before you start the turn, then reduce the Collective just before you come out of it.

Alternately, pull up your nose slightly as you enter the turn, then drop it back down as you come out of the turn. With this method, you can make fast, banking turns without losing altitude.

At speeds below 40 kts, the helicopter will skid ("sideslip") in the direction of cyclic movement, rather than bank into the turn; at this point, you're basically flying sideways.

Easy Flight: Altitude is never lost, no matter how tight the turn. However, the helicopter will sideslip at speeds below 40 kts.

Turbulence

When flying below 100', you may feel air turbulence. You'll sometimes bounce up and down, or roll from side to side. The amount of air turbulence varies with altitude and speed; the faster and lower you fly, the more turbulence you may experience.

Autorotation

Helicopter crewman can't eject or bailout in times of trouble. However, the total loss of engine power means only one thing - they must ride the bucking bronco in.

Fortunately, helicopters have the equivalent of an conventional airplane's "dead stick" landing. This unpowered method of landing is called "autorotation".

To begin an autorotation, disengage the rotor. In real life the pilot must also "bottom" the collective (reduce it to zero), but the collective automatically bottoms when you disengage the rotor. This must be done immediately, or the rotor will slow to a stop (remember it's still engaged to the now-dead engines). If the rotor stops, you'll fall like a baby grand piano.

Now adjust the pitch until your airspeed is about 70 to 90 kts (maximum translational lift). The rotor is now spinning freely because the airflow keeps the blades turning. The descent will become quite fast, a bit frightening to the inexperienced. When you get close to the ground, raise the nose and simultaneously add Collective. The rotor blades will "bite" into the air, giving you lift and slowing the descent. Unfortunately, as the blades start to bite, air resistance slows them down.

You must time the "up collective" so that the helicopter lands gently (figuratively speaking) before the rotor slows too much. If you raise the collective too soon, the rotor will stall and you'll be playing the piano again. If you raise the collective too late, you won't slow your descent and you'll crash. Nobody said it would be easy - it just takes practice.

Easy Flight: Autorotation is not functional with easy flight. It's best to set "no crashes" when in this mode.

Flight Envelope

There are "unsafe" speed and altitude situations that, in the event of total engine failure, will unavoidably result in a crash. These unsafe situations are considered to be outside of the "flight envelope".

Hovering at altitudes from 25' to 500', or high speed flight below 20' to 30' will probably result in a crash if engine power is lost. It takes a certain amount of time to convert from normal flight to autorotation. In these situations, there just isn't enough time to gain control.

However, "unsafe" is a relative term. In combat situations unsafe flying is probably "safer" than taking a hit. During combat, chances must be taken; evaluate the situation and make the best decision.

Rules of Engagement

Everyone has rules they must abide by, and this is no different in combat. Helicopters live and fight near ground level, as high altitude is only safe for the jet jockeys.

The high command wants to assure that you will have a long and distinguished career. Therefore, your maximum altitude is restricted to 1000' in all situations. Any higher, and you'd be a sitting duck.

NAVIGATION

INS System

Pressing the Map View (Pause Menu) displays the high scale mission map. You can always fly to specific points by dead reckoning or, more simply, you may input up to three waypoints into the INS system.

To input waypoints, select the Fly To option; a yellow crosshair appears over your helicopter. Use the D-Pad to move the crosshair to any point on the map, and press the Red button; waypoint #1 is now marked. Existing waypoints are automatically cancelled whenever Fly To is selected (the Blue button will cancel the command).

Because the high scale map is only a representation of the actual terrain, you may want to "fine-tune" the placement of the waypoints. After all, you wouldn't want to fly into a mountain. Select the low scale map. Use the D-Pad to highlight waypoints and select to adjust a waypoint. It's now centred in the map display. Use the D-Pad to adjust its placement; press the Red button to select then the Blue button when finished.

The current INS heading is the flight path to the "active" waypoint. The waypoint range and heading can be displayed in the MFD. The Next Waypoint (Rev button) is used to change the active waypoint. To manually adjust your course, always turn towards the INS pip.

Select the Autopilot (Pause Menu) at anytime to engage the autopilot. When engaged, it flies you to the "active" INS waypoint.

Wind and Weather

When flying during windy conditions, the same considerations that apply to an airplane apply to helicopters. Namely, the wind will increase your speed, slow you down, and/or push you sideways, depending on your flight path in relation to the wind velocity and direction. This is most noticeable on long distance flights.

Temperature also affects helicopter flight. As air gets warmer, it expands and becomes thinner, providing less lift. If the air gets too cold, icing on the rotor becomes a problem. Similarly, in humid conditions the air is composed of more water, reducing lift. Finally, as altitude above sea level increases, air gets thinner, reducing lift. For helicopters, ideal flying conditions are 70° F (21° C) on a dry day at sea level.

LANDING

The nice thing about helicopters is their ability to land without a paved airstrip. However, they can't land on sloping ground. Any slope greater than 5° causes so much rotor tilt that the helicopter flies, or skids away from the slope, making a landing impossible. NEVER try to land on a hillside - you'll crash!

Ideally, all landings, and takeoffs for that matter, should be into the wind. As you approach the base, lower your altitude to about 50' and reduce your airspeed to 60 kts by pulling back slightly on the Cyclic (D-Pad Down). You'll need to reduce the Collective to maintain your 50' altitude. Your goal is to land in the centre of the base. Just before you cross the outside edge of the base, begin slowing down to a hover by pulling back on the Cyclic. Note that as your speed drops towards 0 your lift will decrease. Add some Collective to maintain your altitude.

The wind will tend to push you away from your present position; the Cyclic should be moved slightly toward the wind, producing just enough skid to counteract the wind velocity. This will maintain hover against the wind.

Reduce the Collective (easy does it here) to begin your final descent. At about 20' you may need to reduce the Collective further to achieve touchdown.

Easy Flight: The Collective must be used to change your altitude; however, altitude is unaffected by the cyclic controls.

FARPS

Forward Arming and Refuelling Points (FARP) are highly mobile bases designed to support helicopter operations. They are placed near or around the battle area, and are usually set up to support a particular squadron or mission. They are well stocked with aviation fuel and a full range of weapons.

Your mission orders indicate if a FARP is available for the current mission. If available, you may land at the FARP just like any other base. The ground crew immediately refuels and rearms your helicopter and your flight.

Unfortunately, they're not supermarkets - there's no shopping allowed. Your helicopters are refuelled and rearmed to match your start of mission configurations.

Carrier Landings

You may ask what business the Army has at sea? As a member of a highly trained, elite force, you are more than up to the task. Still, carrier based landings are a little more complicated than your everyday open-field variety.

The landing pad is smaller, and the carrier deck isn't at 0' altitude. The radar altimeter is the key instrumentation; it indicates the proper approach altitude as you centre your position over the deck. The other steps are just like landing on the ground, but be prepared to immediately max the collective if you've misjudged your approach.

Shut Down (D-Pad down and Green buttons)

When you have landed at your base (altitude is 0), disengage the rotor. Your postflight options now appear.

HOW TO FIGHT

Before you take-off, re-examine the mission map and decide on a flight path that will take you to the primary or secondary. Remember, the most obvious route may end up being the most disastrous. Bounding directly into the target at 140 kts and 500' of altitude may work in training, but it's suicide against well-equipped troops.

A standard technique is to fly to the target in short dashes. Fly from behind one hill to another, then hover and pop up briefly to scan ahead. Drop down, pick your next destination and repeat the process. Stay as low as possible when dashing, and use intervening terrain to mask your movement. It may sound boring, but you'll enjoy the results.

Fuel is a major consideration; it isn't unlimited. Don't stretch yourself to the point you can't make it back. This is especially important when flying over water.

Any success quickly turns to failure if you loose your flight to poor fuel planning. Always know the position of your base and FARP. Don't hesitate to "top off" your tanks if there's any question.

THREATS

As you fly, watch the threat display; the top of the display coincides with your current heading. A red dot is an opposing ground unit. A blue dot means an opposing aircraft is approaching. A yellow dot indicates a missile in flight. Note that the threat display can't distinguish between friendly and opposing missiles. A grey dot is a friendly unit or a neutral structure.

When units appear on your threat display, they are also plotted on the maps. They appear darker when they disappear from your threat display; that's their last known position.

Though virtually every opposing unit has some sort of gun or shoulder-launched missile, the most dangerous are AA guns and vehicles and SAM vehicles.

Warning Indicators

Watch your warning indicators; they are the true measure of enemy activity. The "I", "R" and "L" indicators turn or flash red to indicate opposing search or tracking activity. Additionally, the originating unit's dot on the threat display automatically changes to a cross, thereby alerting you to the bearing of the most dangerous threat or threats.

Jammers

When a warning indicator illuminates, the standard response is to turn on the corresponding jammer; this is done automatically by the co-pilot. A small green light beside the warning light illuminates, showing your jammer is active. If the warning indicator turns off, the jamming was successful. Immediately turn onto a new course, as jammed missiles often continue on their old course.

Decoys

If the warning indicator remains illuminated, your co-pilot will try a decoy; Chaff or Flare. The decoy indicator illuminates as long as the decoy is active. The decoy should be drawing the missile or gunnery to its position.

ON THE DEFENSIVE

How they find you

Ground based weapons utilise active radar, passive IR or optical means to search out and find targets.

Search radars can "see" you at long distances in day or night. A distant red dot on the threat display is probably a search radar. Since the purpose of search radars is to detect your presence, jammers and decoys are counter-productive, as both announce your presence!

Other units use short-range passive IR or the old standby - eyesight. They can't see you until you're much closer, and at night optical sighting is especially limited.

All methods of search are blocked by objects on the ground. As a result, ground-based units have a "dead-zone" they can't see. Above this dead-zone the "eyes" will eventually find you. This dead zone becomes smaller and lower as you approach the unit.

How they track you

If a search is successful, they switch to "tracking" mode. If employing radar, they constantly illuminate you with a radar beam. This sets off your radar warning and causes the indicator to illuminate.

When launched, IR weapons set off your IR warning and cause the indicator to illuminate.

If a laser ranger/designator is "painting" your helicopter, the laser warning goes off and causes the indicator to illuminate.

If you're being tracked by radar or an IR weapon, use your jammers and decoys. If that fails try evasive flying.

Dive to a lower altitude while turning parallel to or away from the threat. If you get lower and avoid closing the range (the dead-zone effect), an enemy often loses its track. Evasive flying is a superior option to jammers and decoys, because it doesn't broadcast your position.

Laser guided and visually aimed weapons can't be jammed or decoyed, so evasive flying is your only defence.

Surviving Triple-A

If they find you, opposing guns will open fire and continue to fire until they shoot you down. You must either break the track or destroy the weapon. It's that simple. If the gunfire is radar controlled, you can probably break the track with jamming or chaff. However, all guns have optical backup systems (some have laser systems).

The best way to survive gunfire is skillful evasive flying and dead-eye firepower.

Surviving SAMS

If they find you, SAM equipped units will launch a missile. Missiles are either IR-guided, radar-guided or visually-guided. When a missile is in flight, you'll see a yellow dot moving towards you on the threat display.

Passive IR-guided missiles are the most common threat. Your IR warning indicator illuminates when they approach. Use your jammer or flares to "confuse" the missile, but remember to turn away so as not to collide with it. Sophisticated IR missiles probably have visual or laser back up guidance; don't get too elated if you defeat the IR-guidance, there may still be a nasty surprise in store.

While radar-guided missiles are primarily designed for use against conventional jet aircraft, they still pose a serious threat. A radar beam reflecting off your helicopter guides the missile. This radar beam is what illuminates your radar warning indicator. Your jammer or chaff will "confuse" the missile, but remember to turn away so as not to collide with it. Just like IR-guided missiles, radar homers probably have back-up guidance systems. Therefore, defeating the radar is just the first step in defeating the missile.

Visually or laser-guided missiles are the greatest threats. You have no effective jammer or decoy defenses; your only bet is evasive flying. Putting terrain between you and the missile is the best bet. Flying into the dead zone is the only other hope. Remember, successful evasive flying requires that you fly lower AND away from the launcher. If you continue flying towards the launcher, flying lower may not be effective.

After all this, there is some good news. All missiles have one universal weak point - they have a wide turning radius. If you can get one close, dart off perpendicular to its flight path; it will be unable to turn fast enough to hit you. This tactic is easier said than done in a slow moving helicopter (fast-movers swear by this manoeuvre). It takes enormous skill, and split second timing to turn inside of a missile screaming in at Mach 3.

When out over the water, you have lost the best means of defence - terrain. You'll need to stay extremely alert, since the opposing patrol craft carry a number of defence weapons. Stay low or carry long range weapons, such as Penguin and Maverick.

DAMAGE

If you're unable to "spoof" the threat, the gunfire or missile will probably hit your helicopter. You'll see the explosion and the shudder of your helicopter. If the hit was severe, one or more of the system's status lights will illuminate. Systems will start to malfunction or fail. You'll need to evaluate the damage to determine if you can continue the mission or need to return to base.

If you are hit in multiple or critical systems, your helicopter will lose power. The only way to survive this is to autorotate to a safe landing. The number of hits required for a general systems failure varies; after three or four, you should expect the worst.

HELICOPTER WEAPONS

Targeting

Your on-board targeting system is constantly scanning the forward arc; the system is limited to the front 180°. It can't scan to the rear, so pay close attention to your flight path, and occasionally swing around to check your "six".

The targeting system is line-of-sight dependent. As a result, the higher you are, the farther it can "see". Of course, the higher you are, the easier it is for the other guys to spot you.

The targeting system automatically "locks" onto the closest target. A diamond appears in your forward view, and an image of the target, along with its range and heading data, displays in your MFD. You may switch the target lock, assuming others are in the area, by pressing the Blue button. There may be a momentary delay; the targeting system must re-scan the entire area for new targets.

When the locked target is within maximum range for the selected weapon, the target box becomes a solid. This range varies from weapon system to weapon system, as maximum ranges differ. If you fire at a target before the target box changes, there's no chance of a hit!

Mast-Mounted Sights

The AH-64B Longbow Apache, OH-58D Kiowa Warrior and the AH-6 Defender are equipped with a sighting system mounted on top of the main rotor hub. This system enables these helicopters to “see” at greater ranges. Better yet, they may peer over the top of intervening terrain without exposing the helicopter. Select the Mast View from the Pause Menu; use the D-Pad to rotate your view.

Firing

Depending on the weapon selected, a reticle ring or a fixed crosshair appears in your view. The reticle ring works with “guided” weapons, whereas the crosshair works with “unguided” weapons.

The reticle ring must be superimposed over the target diamond to accurately engage the target; adjust your flight path if necessary. It has a range of movement that represents the angle of offset for the selected weapon. The reticle ring also becomes larger as the range drops, indicating the “confidence” of the shot.

The crosshair is always positioned directly ahead. Unguided weapons always fly or fire as you bear. Adjust your flight path to coincide with the target box. There’s no question it’s a challenge to fire unguided weapons at long range. Aiming errors, no matter how slight, normally result in a miss.

Pressing the Red button fires the “active” weapon. Cannons and machine-guns fire in 20 round bursts. Rockets fire in salvos of 1, 2 or 4. All other weapons fire singly.

Weapons

The weapon indicator displays the “active” weapon, its position and rounds remaining; rockets also indicate the current salvo setting. Press the Blue button to change the active weapon.

All rockets, both gun pods and the AH-6 Defender’s integral gun are unguided weapons; the remaining weapons are all guided.

Certain weapons are only effective against certain target types. Familiarise yourself with these systems. There’s nothing worse than blazing away at a target, wasting round after round, only to discover that you’re using the wrong weapon.

When you fire a cannon or a guided missile, the helicopter bucks and recoils upward; some altitude will be gained due to the loss in forward motion.

Note: this effect isn’t experienced in easy flight mode.

Primaries and Secondaries

If a locked target is part of the primary or secondary mission, a prompt appears in the MFD along with the other target data.

The CP/G (Co-Pilot/Gunner)

Your invisible co-pilot/gunner (the front seater - back seater if you’re flying the AH-66A Comanche) assists you in two ways during the course of a mission. First, by communicating important system status and threat/target information; and second, by assuming control of part of the weapon systems functions. The degree of weapon system control is dependent upon the CP/G reality switch setting.

ON THE OFFENSIVE

The best thing about helicopters is their ability to approach targets undetected; they literally live (from a survival standpoint) at nap-of-the-earth (NOE) altitude - about 100'. They move in and out of the terrain like a jungle cat stalking its prey.

Use long range engagements; the further you stay away, the better. Most of your weapons are longer-ranged than the opposition's - take advantage of it.

If you only remember one thing, NEVER overfly the target. If you didn't destroy the target, you're giving away a free shot at your tail.

First and foremost, choose the right tool for the job. Evaluate your mission orders carefully and outfit your helicopters with the most advantageous mix of weapons. For example, if you're ordered to intercept enemy shipping, you may want to take a few Penguins or Mavericks along for the ride.

Weapons

Once in combat, make sure that the "active" weapon is the most effective choice. Don't try to fire Sidewinders at tanks or TOWs at aircraft.

Cannons: are close range weapons that are best fired straight ahead. Deflection shots to the sides will consume more ammunition and reduce your chance of a hit. The Apache A&B's 30mm cannons and the SuperCobra's and Comanche's 20mm cannons are essentially guided weapons - they're aimed by your targeting system. The defender's machine-gun and pod guns must fire straight ahead.

Machine-guns: are very close range weapons, and can only be fired straight ahead. They lack the penetrative power of cannons, and therefore are only effective against unarmoured targets.

Rockets: are available in three types. Each is best suited for a particular type of target, but can be effective against other target types. They're unguided weapons, and are therefore easier to fire at close range. However, they can be fired in salvos, and you can carry a fair number.

ATGMs: are also available in three types. They're powerful anti-armour weapons that can be effectively utilised against structures, ships and even slow moving aircraft.

TOW is a wire-guided weapon that's steered to the target. It's not as difficult as it may seem. As long as the target is locked, corrections to the missile's flight path are automatically calculated and transmitted to the TOW over the un-spooling wire. However, the wire is the biggest limitation - it runs out at about 3,800 meters.

HellFire-A is a laser designated weapon that homes in on reflected laser light. It's much longer ranged than the TOW and has a wider target envelope. Since the Hellfire "sees" the reflected light, the designation can be switched to a different target; if it's within the target envelope, the Hellfire will hit the new target. This allows for "ripple fire" tactics. Multiple missiles are fired at short intervals; after the first hits, the designator "spots" the new target, and then guides the second missile.

Lasers are not as effective during low visibility conditions. Rain, fog and snow can reflect some or all of the laser light limiting range and hit probabilities. There's another disadvantage; if you're designating your own target, you must also expose the helicopter until the Hellfire hits the target.

Hellfire-B is the latest version of this effective weapon system. It's the primary armament on Longbow Apaches; it can't be carried on Model-A Apaches. It replaces the laser homer with a fire-and-forget millimetre wave radar homer. All you do is find the target, and fire the missile - it doesn't get any easier. This combined with the Longbow's mast mounted sight makes for a potent, unbeatable combination.

Sidearm: is designed to home in on any surface radar emission source; therefore, it's classified as an "anti-radiation missile". Its big brothers, HARM, Standard and Shrike, have been utilised to great effect on conventional aircraft for years. Now, helicopters possess a similar punch. You don't have to get a target lock to fire a Sidearm; just make sure to fire it towards the radar source. It's fragmentation warhead and fire-and-forget technology make it one terrific "quick-draw" weapon - a surefire way to permanently cancel that radar.

The Big Loads: Maverick and Penguin are heavyweight special purpose weapons. Their use in helicopters is shrouded in controversy; some argue they're not worth their weight. The opponents feel that Hellfire is just as effective, and you can carry 4 Hellfires for every 1 Maverick or Penguin. On the other hand, Maverick and Penguin are both longer ranged than the Hellfire and are fire-and-forget weapons. The arrival of Hellfire-B makes the argument even hotter - the decision is yours.

Masking

This is the method of terrain shielding often called the "pop up". It's also where the auto-hover pays for its weight. It automatically maintains your present position and altitude even in the face of a stiff wind.

Pull up behind a convenient hill position and drop your airspeed to 0; your altitude should be about 100' - 150'. As your airspeed approaches 8 -10 kts (it must be 10 kts or less), tap the Auto-Hover (Green button); this immediately reduces your airspeed to 0.

Now press the Collective Up (D-Pad Up & Yellow) to start a slow ascent. As you clear the crest of the hill, stop your ascent. If your helicopter is equipped with a mast-mounted sight, stop the ascent just as the sight clears the hill. You're now in position to scan the surrounding area.

If you lock onto an important target engage it immediately, and then drop down below the crest; press the Collective Down (D-Pad Down & Yellow). Otherwise, drop below the crest and re-evaluate the situation. If necessary, check the mission map. You may need to adjust your flight path, or unmask again to engage the other targets.

As an alternative approach, rotate the helicopter left or right by moving the Cyclic left or right. Then push the Cyclic ahead slightly to add a few knots of airspeed. Try to keep your airspeed under 10 kts. As you clear the side of the hill, select Auto-Hover, and rotate back to the forward area. After scanning the area or engaging the targets, reverse the process (with a little more haste this time), and duck back behind the hill. While this method of unmasking limits the scanning range, due to low altitude, it's an excellent method of engaging known targets - longer ranged targets probably won't spot you.

Remember with auto-hover active, you can quickly drop altitude by virtually bottoming the collective; it holds you at the low limit.

Targets

Your missions present a number of target options, each with unique characteristics requiring different tactics of engagement or weapon selection. Always look before you shoot; the high command gets real upset when you start shooting up the friendlies.

AAA & SAMs: are your biggest challenge. These are the only targets that can fire back with any real effect. Getting in the first shot is the key here. Both types have reaction times of 5 to 20 seconds, depending on the sophistication of equipment and the skill of the crew. If you plan your attack carefully, you can "take them out" before they even get a shot off.

Tanks & Light Vehicles: can be a turkey shoot. Attack helicopters, especially the Apache, are made to destroy tanks and vehicles. The tanks don't carry anything larger than a short range 14.5mm machine-gun; you can pick them off easily. IFVs and APCs can be a bit nastier; they carry shoulder-launched SAMs. Most of the other vehicles, such as truck convoys, are totally unarmed.

This may seem too good to be true, but before you think it's a cakewalk, the opposition has also recognised these weaknesses. Groups of tanks and other vehicles normally travel with AAA & SAM vehicles. Keep an eye out for these escorts.

Working on the Railroad: doesn't get any easier than this. Railroad "rolling stock" isn't much of a challenge, but important none the less. You know where they are and where they must go; it's just a matter of laying in wait and taking them out of action.

Naval Targets: can get quite pesky, and the opposition has a habit of placing armed forces on their oil platforms. Guided weapons are a must in these situations. They are better suited to deal with the manoeuvrable patrol craft, and you need their punch to take out the oil platforms.

Infantry: are difficult to spot and root out. They're only armed with light weapons, but most also carry shoulder-launched SAMs. Rockets and cannon/machine-gun fire are a good choice in this case.

Structures: pose problems similar to infantry. Although bigger and easier to spot, they are seldom undefended. SAMs and all types of AAA guns are usually in the vicinity. If you pick off the defenders first, the structures are then fair game.

Bunkers and bridges are especially tough nuts to crack. It may take more than one hit to destroy them.

AIR-TO-AIR COMBAT

When helicopters were first envisioned as combat weapons, the importance of air-to-air combat was all but overlooked in the USA. But the Soviet planners were not so shortsighted.

The Soviets always placed a strong emphasis on air-to-air combat, and made concerted efforts to design this capability into their helicopters. Many in the US Intelligence community consider the new Ka-34 Hokum to be a purpose built "anti-helicopter" helicopter.

Fortunately, the US military planners are no longer ignoring this all too important technology. Air-to-air weapons have become a standard load when flying where air superiority is in doubt. The new AH-66A Comanche is designed with a high degree of air combat functionality; it's closer in concept to high-performance jet aircraft than past helicopter designs.

In actual air-to-air combat, one facet that requires constant vigilance is a helicopter's ability to spring from nowhere. It's on you before you know what is happening, snaps off a missile and vanishes in the wink of an eye.

Helicopter borne air-to-air missiles are the primary threat. They come in all varieties of homers, and are usually more manoeuvrable than ground based weapons. The helicopters also carry machine-guns or cannons. Unit for unit, they can pack just as strong a punch as the friendlies.

Altitude: Stay low! Aircraft like nothing more than to find a helicopter flying up where only the eagles should dare. It's bad enough exposing yourself to the ground fire, but it's murder against aircraft.

Take the First Shot: If you can get the first shot in, you have the best chance of coming out on top. Pay attention to the threat display, and stay ready to snap off a quick shot.

Range: Fire at the longest range possible. This gives you a chance to reposition and take additional shots. Additionally, if they have ordnance in the air, it gives more time to counter or evade.

Hold the Advantage: Get on the aircraft's tail or keep it to your front. NEVER lose sight of the enemy! If they get on your tail, use a side flare or a horizontal scissors to reverse the advantage. If necessary, use the Left or Right View to maintain visual contact.

Weapons

There aren't as many decisions to make with air-to-air weapons. They are adaptations of existing weapon systems. To date, the first purpose built helicopter AAM is yet to be seen.

Cannons: is the choice for close quarters. The Apaches, SuperCobra and Comanche use their helmeted mounted sights to maintain lock-on during tight twists and turns. Fixed-firing cannons can still be effective, especially with tail shots. Don't waste your time with machine-guns; when you're up against gunships, their armour can't be penetrated.

Sidewinder: the father of the Sidearm, is one of the most successful and tested weapon systems in service. It's a highly manoeuvrable, fire-and-forget IR homer. It's long-ranged and packs a potent warhead. Like Sidearm, you don't have to get a target lock; just make sure to fire it towards the IR source. Long range multiple engagements are a simple process; just disperse the missiles so they don't home in on the same target.

Stinger: may be about half the weight of Sidewinder, but is certainly more than up to the task. You can also carry twice as many Stingers as Sidewinders; you never know when you may need those extra shots. While it may be shorter ranged, it'll reach just about every thing you can see. Some targets may take two hits, but those should be few and far between.

Helstreak: is a British import that's derived from the ground-based Starstreak SAM. It's carried by the Longbow Apache and the Comanche. It's not a fire-and-forget system; laser guidance must be provided by the launching helicopter. Therefore, a lock-on must be attained prior to launch. On the plus side, it flies faster than Sidewinder and Stinger, which reduces the exposure time. Its three element warhead covers a broad area, so close is probably good enough. As an added advantage, it can also fire at ground targets. Its warheads can pierce most medium weight armour.

Targets

Helicopters: For the most part, Stingers and Helstreaks are more than adequate. It's the rare case where one shot won't do the trick; Sidewinders may be overkill. Don't discount Hellfires in a pinch. If the helicopter isn't moving too fast, you can reasonably maintain a lock, especially from hover. When you get in close, switch to cannon and 'hose' them down. M255 rockets can also be a nasty surprise!

HELICOPTER FLIGHT COMMANDS

(Pause Menu - Map - Flight Commands)

The essence of *Gunship 2000* is the multi-helicopter operations. Through this mechanism, you direct the flying, combat and support functions of the other four helicopters in your flight. After receiving your commission, the door opens to this challenging and exciting process.

SYSTEM SUMMARY

Select the Map View (Pause Menu) to access the flight commands menu. The commands are listed across the bottom of the screen. Commands available to the "active" section or helicopter display "brightly".

As you toggle through the helicopters (REV & FWD buttons), information relating to the "active" helicopter displays along the left side. The combat data link system automatically tracks key helicopter systems and mutually transmits this data via its communication link to all helicopters in the flight.

Damage Schematic

The schematic helicopter diagram graphically displays damage to helicopter systems. A yellow burst over a system indicates damage; a red burst indicates system failure.

The Rotor, tail rotor, left wing, right wing, left engine, right engine and cannon indicate damage in their respective positions. Optics are located in the nose and/or mast mounted sight; avionics are located in the tail boom; and fuel cells are located below the cockpit positions. While these positions may not be true location in all helicopter types, the consistency helps speed recognition.

Helicopter Status

The helicopter's current orders and key system indicators display below the damage schematic.

COMMAND CONTROL (Pause Menu - Map Options)

The command list is utilised to pass instructions to the other helicopters in the flight. Commands given to a section leader apply to all helicopters in that section. Helicopters in your section always fly your course, speed and altitude unless instructed to do otherwise.

Next Unit

All commands applicable to a section leader may also be given to a single helicopter. In this case, the helicopter deviates from the leader's control.

Select Next Unit to toggle between the helicopters. If the helicopters are flying as part of a single section, the helicopters display in numerical order. If a heavy and light section are both operational, the other section leader displays first, followed in numerical order by the remaining helicopters.

Fly To

Select Fly To to establish a flight path. Up to three waypoints can be placed. This command is applicable to your helicopter.

Hold Position

Select Hold Position to order the section to maintain its present position. The Section maintains its current altitude and heading, but reduces its airspeed to 0. This command can be given to a section at any point; it doesn't cancel existing waypoints. Upon reaching its destination, the section immediately assumes a hold command.

Speed

Select Speed to modify the section's airspeed. There are three possible cycle through settings- slow, medium and fast.

Slow speed is 50% of the possible maximum for the current altitude.

Medium speed (the default) is 75% of the possible maximum.

Fast speed is 100% of the possible maximum.

Altitude

Select Altitude to modify the section's altitude. There are three possible settings - NOE, contour and low.

NOE altitude (the default) is 20' higher than your present low altitude limit setting.

Contour altitude is 150' higher. Low altitude is 350' higher.

Land

Select Land to order the section to land upon reaching its final waypoint. If no active waypoints exist, the section immediately lands. The section seeks out terrain suitable for a landing in the immediate area.

Return to Base

Select Return to Base to order the section to return to base; all existing waypoints are cancelled. If on a deep strike mission, the section returns to the passage point.

The section initiates the default speed and altitude unless ordered otherwise. The section takes the most direct route to the base, and lands upon reaching its destination.

This command is applicable to your own helicopter. It sets a single waypoint with your base as the destination. You must initiate the autopilot or head towards the waypoint.

Disengage

Select Disengage to order the section to break contact and move away from all opposing forces. Upon reaching a "safe" position, the section assumes a hold command. This command cancels all existing waypoints.

The section disregards this command if not currently in contact with opposing forces.

Regroup

Select Regroup to order an independent helicopter to immediately rejoin its section. It takes the most direct route, and initiates default speed and altitude settings. This command cancels all existing waypoints.

Weapons Free

Select Weapons Free to order a section to engage all sighted targets. The section employs the appropriate weapons, if available, based on target type.

Cargo Drop

Select Cargo Drop to order the section's cargo carrying helicopters immediately to drop their cargo. The section's UH-60 K/L Blackhawks drop their cargo upon reaching the Primary/Secondary waypoint.

COMMUNICATIONS

Communication is the key element to any successful operation. Since you're an active pilot in the flight, not some desk jockey, you must rely on your pilots to keep you abreast of developments.

During the course of a mission, your pilots communicate key information and status updates. The messages include target sightings, reaching destinations and damage updates.

Their call sign appears on the screen, along with their message. This enables you to fly your portion of the mission and not constantly check on flight status.

When important situations do develop, you can immediately access the Map view to re-evaluate and revise orders as necessary. If, for any reason, you are unable to read an entire message, select Last Message to re-display the last message.

Experience

Use your flight to the best of its abilities. Inexperienced pilots may not do exactly what you had in mind. Developing skills and moxie takes time, just as you've probably found out by now. Experience is a measure of missions flown, rank and decorations. Your best pilot will have flown the most missions, is one rank under you, and has a chest full of decorations.

Commands

Try to envision yourself flying this leg of the mission; what would you do if you were there? Apply a command stream that accomplishes that image. If you give them poor orders, they'll perform poorly. You're their commander; they look to you for the right measure.

The tactics described earlier still apply here. Fly and fight smart!

Scouts

Scouts play a very useful role as independent helicopters. Send one on ahead to look for enemy units and/or to clear a safe flight path. It's no use sending loaded Blackhawks into totally unfamiliar territory; their loads are just too valuable to squander away.

A Kiowa Warrior can also mark targets for Hellfire equipped Apaches, SuperCobras and Blackhawks. The gunships can wait safely behind a hill while the Kiowa Warrior is out looking for some ripe targets.

Ambush

With the opposing forces constantly on the move, it's easy to stumble across a force occupying an area you thought was clear or just flew through a few minutes ago. It's usually expedient to position a helicopter in covering terrain along any suspected movement paths.

Also, a helicopter can be positioned to watch your "back door". This way you can be confident that your means of exit is clear of enemy forces when you need to get out quick.

Special Considerations

Upon landing, UH-60K/L Blackhawks automatically drop off their passengers, unless at a base or FARP. Be sure they're at the correct location before giving the orders to land. They also automatically pick up any passengers, if in the vicinity, when they land.

Cargo drops are also automatic. Even though cargo can be successfully dropped without making a landing, it's easier to verify the location by landing first. Of course, if the LZ is "hot", you may be forced to drop the load and get out quickly.

AFTER THE MISSION MEASURE OF SUCCESS

If you do nothing else, complete the primary and secondary missions, and return safely to your base. If you can manage only one of the two, make it the primary. Promotions and decorations are awarded for hitting the assigned 'targets' and returning an intact helicopter to base. Time is also a performance measure. You can't spend the entire day flying just one mission.

Ditching

If you land and abandon your helicopter, every attempt is made to pick you up, but you may be captured by the opposing forces. Naturally, the chance of rescue increases if you're near a base or FARP. The best bet is to make it back to base. It's better to return even if you can't complete your missions. You can always return to fight another day.

Campaigns

When a campaign is completed, you are advised as to the outcome. This shouldn't be any surprise, you've known the progress all along. The campaign map is routinely updated when you attend briefings.

Promotion

Successful completion of your assigned mission improves your overall record. An excellent record leads to promotion. However, even in combat, promotions take time. Don't expect a promotion after every mission. As you increase in rank, promotions are even harder to come by. After all, not everyone can be a Brigadier General.

Decorations

If you do exceptionally well on a mission, you may be awarded a medal for heroism and valour. Unlike promotions, decorations are based purely on your performance during a single mission. Your current rank and record have no effect on your chance of getting decorated.

FLIGHT PROMOTIONS

The pilots in your flight are also eligible for promotions and decorations. The high command makes recommendations as to who should be promoted and who should receive decorations. As the flight commander, you're authorised to accept the recommendations or transfer the awards to other pilots.

To change a recommendation, highlight the award and press the Red button. The award is transferred to the next pilot. Promotions are automatically adjusted to the next higher rank. A pilot can't be promoted to a rank equal to your current rank. Decorations are awarded as presented.

When you concur with the recommendations or changes, highlight the Accept key and press the Red button.

REPLACEMENTS

If you're ever faced with the unfortunate situation of having lost a pilot in combat, you'll automatically receive a W-01 replacement from the pilot pool.

If you're not satisfied with the replacement or you wish to change an existing pilot, the pilot replacement screen is provided to make these administrative changes. You may replace the pilot, but the new pilot's rank and decorations are comparable.

Highlight the pilot to be replaced, and press the Blue button. Enter the name of the new replacement and then press the Red button.

IMPORTANT NOTE

If you have a keyboard attached to your CD-32 you may choose to play *Gunship 2000* via the keyboard and/or joystick (see input devices menu in Pause Menu).

Selector #1	Selector #2
Return key	Backspace Key
Left Mouse Button	Right Mouse Button
Fire Button	Backspace Key

Simulation Controls

Quit to DOS	Alt/Q keys
End Mission	Alt/E keys
Pause	Alt/P keys
Last message	Alt/M keys
Change Selection	Move Selector
Choose Selection	Selector #1 / #2
Leave Screen	Esc.
Cancel Command	Esc
Accelerate Time	]
Normal Time	[

Simulation Views

Cockpit	F1
Mast	F2
Left	F3
Right	F4
Flight Chase	Shift + F5 keys
Tactical	F6
Remote	F7
Reverse Tactical	F8
Missile	F9
Map View	F10
Change Map Scale	Spacebar

Flight Commands

Next Unit	N
Fly To	F
Hold Position	H
Speed Adjust	S
Altitude Adjust	A
Land	L
Return to base	B
Disengage	D
Regroup	G
Weapons Free	W
Cargo Drop	C

Flight Controls

Cyclic Forward	Up Arrow/ Controller
Forward	
Cyclic Back	Down Arrow/ Controller Back
Cyclic Left	Left Arrow/ Controller Left
Cyclic Right	Right Arrow/ Controller Right
Collective Up	=
Collective Up Fast	Shift/= keys
Collective Down	-
Collective Down Fast	Shift/- keys
Gear Up/Down	3
Autopilot On/Off	5
Next Waypoint	6
Previous Waypoint	7
Bay Open/Close	8
Rotor Engage/	
Disengage	9
Auto-Hover	0
Change Single or	
Left MFD	Z
Change Right MFD	X
Low Limit -	C
Low Limit +	V

Weapon Controls

Rocket Salvo x1	1
Rocket Salvo x2	2
Rocket Salvo x4	4
Acquire/Next Target	Selector #2
Radar Jammer On/Off	N
Drop Chaff	M
IR Jammer On/Off.	.
Drop Flare	/
Select Weapon	Spacebar
Fire Weapon	Selector #1
Jettison Weapon	Shift/Spacebar

GUNSHIP 2000



THE MULTI-HELICOPTER GUNSHIP SIMULATION

Gunship 2000 puts you in the pilot's seat of a modern helicopter gunship, flying across a visually accurate topographical 3-D world. This is your chance to battle through two massive combat theatres and to undertake missions that will test your leadership skills to the full.

Ultimately, you'll command five choppers - you choose the type, you choose the weapons, you choose the crew and you give the orders - as mission after mission is mercilessly thrown at you in vast military Campaigns.

Gunship 2000 - with full training, decorations and career promotions, this is the ultimate combat helicopter simulation.



DIE MULTI-KAMPFHUBSCHRAUBER-SIMULATION

Gunship 2000 setzt Sie in den Pilotensessel eines modernen Kampfhubschraubers, der durch eine visuell wahrheitsgetreue topographische 3-D-Welt fliegt. Dies ist Ihre Chance, sich durch zwei riesige Gefechtschauplätze zu kämpfen und Einsätze zu fliegen, die Ihre Führungsqualitäten bis zum Äußersten auf die Probe stellen werden.

Am Ende werden Sie das Kommando über fünf Hubschrauber haben - Sie wählen den Typ, bestimmen die Waffen, suchen die Besatzungen aus und geben die Befehle, während in gewaltigen Kampfunternehmen gnadenlos Einsatz um Einsatz auf Sie zukommt.

Gunship 2000 - mit seinem vollständigen Ausbildungsprogramm, den Auszeichnungen und Beförderungen, ist dies die ultimative Kampfhubschrauber-Simulation.



LA SIMULATION MULTI-HELICOPTERES

Dans Gunship 2000, vous prenez la place du pilote d'un hélicoptère de combat moderne, volant dans un monde topographique en 3D d'une grande précision visuelle. C'est l'occasion pour vous de combattre dans deux immenses théâtres d'opérations et d'entreprendre des missions qui testeront vos compétences de leader jusqu'à la limite.

Vous prendrez le commandement de cinq hélicoptères. A vous d'en choisir le type, l'armement et l'équipage. Donnez les ordres appropriés, dans une succession de missions épuisantes, lors de campagnes militaires de grande envergure.

Gunship 2000: avec entraînement intégral, décorations et promotions. C'est la suprême simulation d'hélicoptères de combat.



GUNSHIP 2000 CD 32

All the thrills. All the excitement. All the helicopters you could ever want.

Der ganze Nervenkitzel. Die ganze Spannung.
Sämtliche Hubschrauber, die Sie sich je erträumt haben.

Tous les frissons. Toute la passion. Tous les hélicoptères que vous avez jamais pu imaginer.

ATTENTION

Chez certaines personnes, l'utilisation de ce jeu nécessite des précautions d'emploi particulières qui sont détaillées dans la notice ci-jointe.

